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IS 4513 (1968): Scissors, Surgical Dressing and Stitch [MHD
1: Surgical Instruments]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 4513 - 1968
(Reaffirmed 1977)

Indian Standard
SPECIFICATION FOR
SCISSORS, SURGICAL DRESSING AND STITCH

REAFFIRMED 2006

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR

SCISSORS, SURGICAL DRESSING AND STITCH

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Indian Standard

SPECIFICATION FOR SCISSORS, SURGICAL DRESSING AND STITCH

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 21 February 1968, after the draft finalized by the Surgical Instruments Sectional Committee had been approved by the Consumer Products Division Council.

0.2 Formulation of Indian Standards on surgical instruments has been taken up at the instance of the Advisory Committee for Development of Surgical Instruments, Equipment and Appliances, Government of India.

0.3 In preparing this standard, assistance has been derived from B.S. 3646 : 1963 'Specification for surgical dressing and stitch scissors', published by British Standards Institution.

0.4 This standard is one of a series on surgical instruments.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers the requirements for surgical dressing and stitch scissors (straight and curved-on flat) with blunt points or with sharp points and with blunt and sharp points in sizes of 130, 140, 150 and 180 mm nominal lengths.

2. MATERIAL

2.1 Scissors shall be made of stainless steel conforming to Designation 30Cr13 of Schedule V of IS : 1570-1961†.

*Rules for rounding off numerical values (*revised*).

†Schedules for wrought steels for general engineering purposes.

2.2 Screw shall be made of stainless steel either the same as used for the instrument or shall conform to Designation 22Cr13S28 of Schedule V of IS : 1570-1961*.

3. SHAPE AND DIMENSIONS

3.1 Scissors shall conform generally to the shape and dimensions shown in Fig. 1, 2 and 3.

3.2 Screw used shall be of a slotted cheese head pattern as shown in Fig. 4. The profile of the screw thread shall conform to IS : 1362-1962†.

3.2.1 The thread shall be of such length as to allow sufficient shank for proper bearing and to adequately secure the two halves of scissors with proper tension for cutting. Screw shall retain position after setting without binding or loosening during use and shall be flush with the surface of the blades.

3.3 Finger loops — Finger loops shall be properly shaped and the sizes shall conform to Section 5 of IS : 3642-1966‡.

3.4 The distance across the face of the cutting bevel edge shall be not less than 0.5 mm except at the extreme tip of sharp-pointed blades where it shall not exceed 0.5 mm. The tips of sharp pointed scissors shall be of chisel-like edge as shown in Fig. 5.

3.5 In case of curved scissors, the blades shall be uniformly curved.

4. WORKMANSHIP AND FINISH

4.1 Scissors shall be symmetrical and well-balanced.

4.2 The blades shall close fully and freely with a continuous pinch, without stiffness and excessive cross-over action. There shall be no play at the joint.

4.3 Scissors shall be free from cracks, seams, burrs, flaws and other defects. The surfaces of the scissors shall be passivated and finished smooth and bright. The edges shall be even and rounded except for the cutting edge which shall be sharp. The cutting edges shall not have any feather.

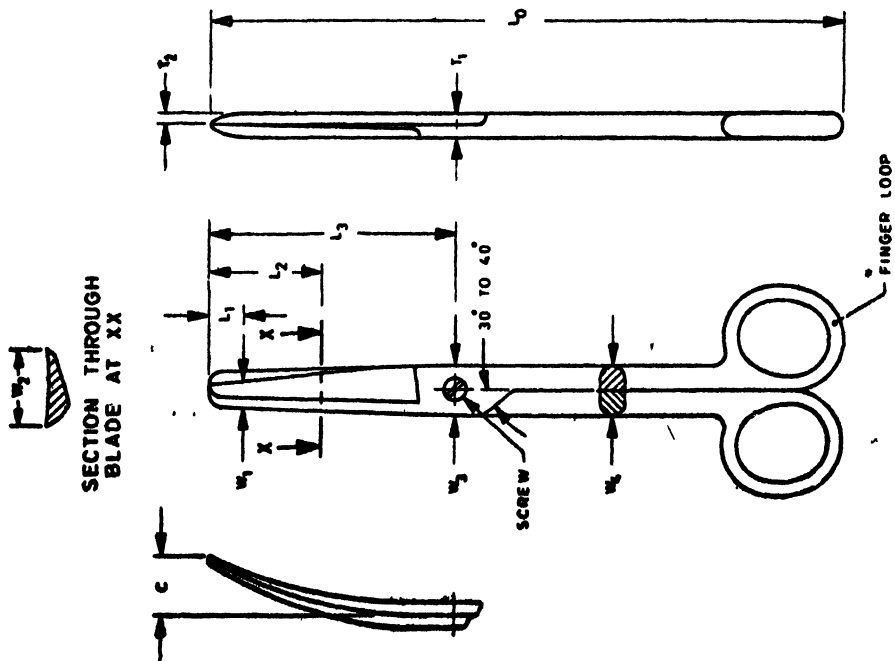
5. HEAT TREATMENT

5.1 Scissors shall be evenly hardened and tempered to 550 to 600 HV.

*Schedules for wrought steels for general engineering purposes.

†Dimensions for screw threads for general purposes (dia 1.6 to 39 mm).

‡General requirements for surgical instruments.



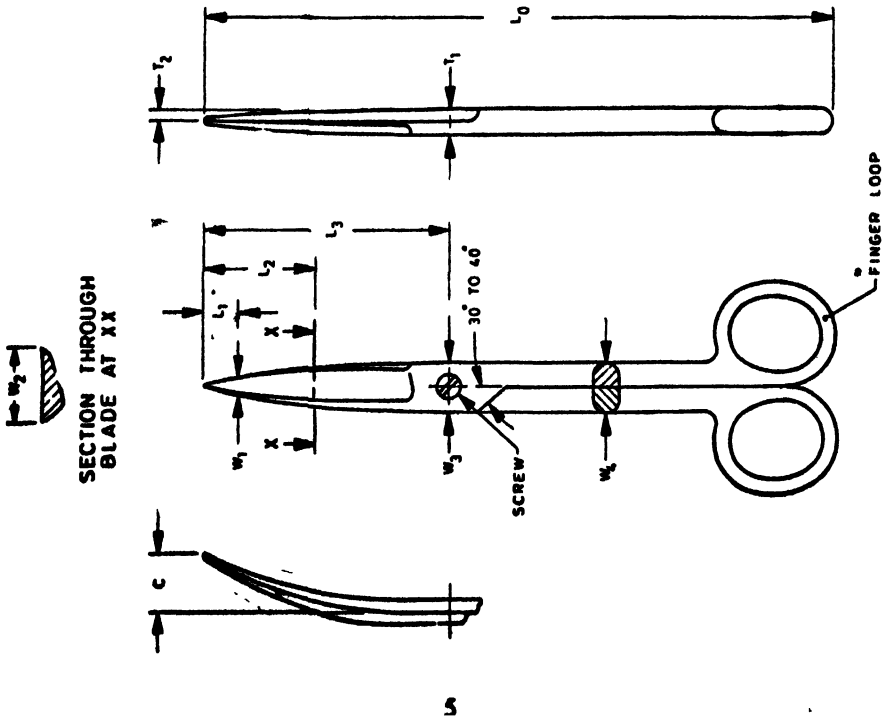
DIMENSION	130	140	150	180	TOLERANCE
L_0	6.0	6.0	6.0	6.0	Nominal
L_1	20	30	30	40	—
L_2	45	55	60	65	—
T_1	5.5	6.5	6.5	6.5	± 0.5
T_2	1.5	2.0	2.0	2.0	± 0.5
W_1	5.0	5.5	5.5	6.5	± 0.5
W_2	7.0	9.5	9.5	11.0	± 0.5
W_3	9.5	11.0	12.0	13.5	± 0.5
W_4	9.5	11.0	12.0	13.5	± 0.5
C^*	11.0	13.0	15.0	18.0	± 1.0
Screw	M_3	M_1	M_3	M_3	
Finger loop	No. 2	No. 2	No. 2	No. 3	

*Only applicable to blades, curved-on flat.

All dimensions in millimetres.

*See IS : 3642-1966 General requirements for surgical instruments.

FIG. 1 SURGICAL DRESSING AND STITCH SCISSORS WITH BLUNT POINTS



**FIG. 2 SURGICAL DRESSING AND STITCH
SCISSORS WITH SHARP POINTS**

*See IS: 3642-1966 General requirements for surgical instruments.

All dimensions in millimetres.

***Tolerance not specified.**

†Only applicable to blades, curved-on flat.

DIMENSION	130	140	150	180	TOL- RANCE
L_0	6.0	6.0	6.0	6.0	Nominal
L_1	20	30	30	40	—
L_2	45	55	60	65	—
T_1	5.5	6.5	6.5	6.5	± 2.5
T_2	1.0	1.5	1.5	1.5	± 0.5
W_1	2.5	2.5	2.5	2.5	± 0.5
W_2	5.5	8.0	8.0	9.5	± 0.5
W_3	9.5	11.0	12.0	13.5	± 0.5
W_4	9.5	11.0	12.0	13.5	± 0.5
$C\ddagger$	11.0	13.0	15.0	18.0	± 1.0
Screw	M_2	M_2	$M_3.5$	M 3.5	
Finger loop	No. 2	No. 2	No. 2	No. 3	

*Tolerance not specified.
†Only applicable to blades, curved-on flat.

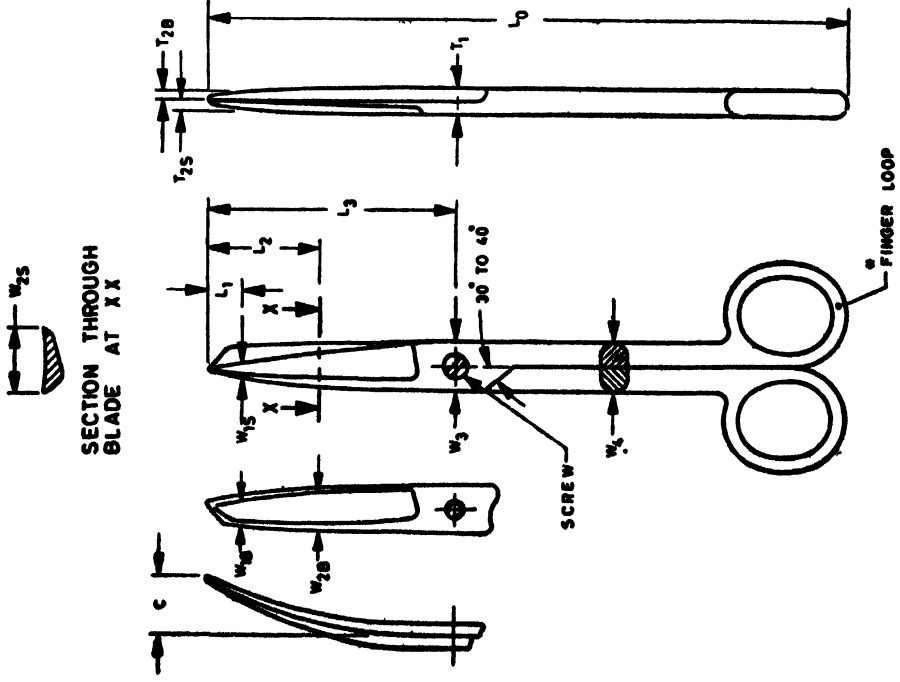
DIMENSION	TOLERANCE				
	130	140	150	180	Nominal
L_a	6	6	6	6	—
L_1	20	30	30	40	—
L_2	45	55	60	65	± 2.5
T_1	5.5	6.5	6.5	6.5	± 0.5
T_2B	1.5	2.0	2.0	2.0	*
T_3S	1.0	1.5	1.5	1.5	*
W_1B	5.0	5.5	5.5	6.5	± 0.5
W_1S	2.5	2.5	2.5	2.5	± 0.5
W_2B	7.0	9.5	9.5	11.0	± 0.5
W_2S	5.5	8.0	8.0	9.5	± 0.5
W_3	9.5	11.0	12.0	13.5	± 0.5
W_4	9.5	11.0	12.0	13.5	± 0.5
$C \dagger$	11.0	13.0	15.0	18.0	± 1.0
Screw	M 3	M 3	M 3.5	M 3.5	
Finger loop	No. 2	No. 2	No. 2	No. 3	

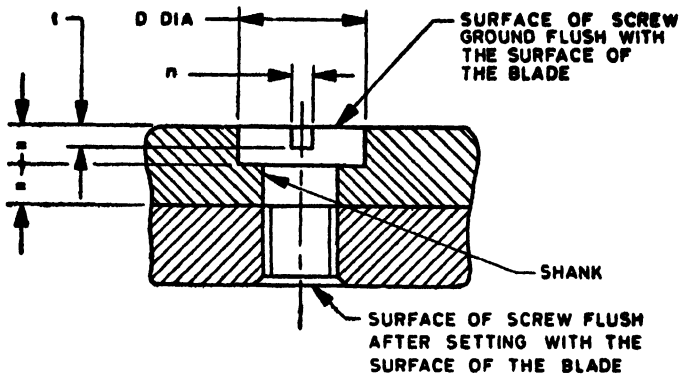
*Tolerance not specified.
†Only applicable to blades, curved-on flat.

All dimensions in millimetres.

*See IS : 3642-1966 General requirements for surgical instruments.

FIG. 3 SURGICAL DRESSING AND STITCH SCISSORS WITH BLUNT AND SHARP POINTS





<i>Screw Size</i>	<i>Pitch</i>	<i>D</i>	<i>n</i>	<i>t</i>
M 3.5	0.6	6	0.8	1.0
M 3	0.5	5	0.8	0.9

All dimensions in millimetres.

FIG. 4 DETAILS OF SCREW ASSEMBLY

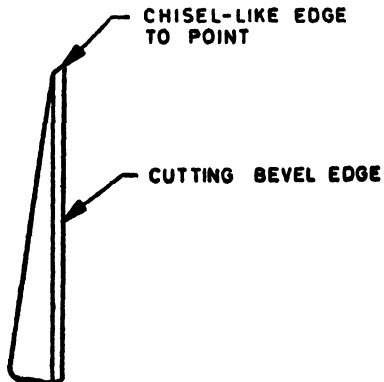


FIG. 5 SHARP POINT OF SURGICAL DRESSING AND STITCH SCISSORS (ENLARGED)

6. TESTS.

6.1 Performance Test — The scissors shall cut, from pinch to tip, wet tissue paper, teased out cotton wool, fine hair and frayed lint accurately and cleanly. The tip shall cut chamois leather neatly. The test shall be carried out with both right and left hands.

6.2 Corrosion Resistance — The scissors shall be tested for corrosion resistance as prescribed in 6.2.1.

6.2.1 Copper Sulphate Test — The sample shall be scrubbed with soap and warm water, rinsed in hot water, followed by a dip in ethyl alcohol (95 percent) and dried. The sample shall be completely immersed in copper sulphate solution at room temperature for 6 minutes and shall then be washed off with fresh water or wet cotton wool. The copper sulphate solution shall be made up as follows:

Copper sulphate ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$)	4.0 g
Sulphuric acid (H_2SO_4) (sp gr 1.84)	10.0 g
Water (H_2O)	90.0 ml

There shall be no red stains or spots on the sample after the test, but the polished surface getting dull may be permitted.

7. MARKING

7.1 Each scissors shall be legibly and indelibly marked with the manufacturer's name or initials or recognised trade-mark and the words 'STAINLESS STEEL'.

7.1.1 The scissors may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

8. PACKING

8.1 Each scissors shall be wrapped in moisture-proof polyethylene bag and packed in cartons in a manner that coming into contact with one another is avoided.

AMENDMENT NO. 1 JULY 1975

TO

IS:4513-1968 SPECIFICATION FOR SCISSORS,
SURGICAL DRESSING AND STITCH

Alterations

(Page 8, clauses 6.2 and 6.2.1) - Substitute the following for the existing clauses:

'6.2 Corrosion Resistance - The instrument shall satisfy the boiling and autoclaving test as mentioned in IS:7531-1975*.'

(Page 8, foot-note) - Insert the following foot-note at the bottom of the page:

'*Method for boiling and autoclaving test for corrosion resistance of stainless steel surgical instruments.'

(CPDC 11)

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